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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/710,403	07/08/2004	Kun-Rong CHANG	OTMP0082USA	4402
27765	7590	10/05/2005	EXAMINER	
NORTH AMERICA INTELLECTUAL PROPERTY CORPORATION			CRUZ, MAGDA	
P.O. BOX 506			ART UNIT	PAPER NUMBER
MERRIFIELD, VA 22116			2851	

DATE MAILED: 10/05/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

EL

<b>Office Action Summary</b>	<b>Application No.</b> 10/710,403	<b>Applicant(s)</b> CHANG, KUN-RONG	
	<b>Examiner</b> Magda Cruz	<b>Art Unit</b> 2851	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 08 July 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-4 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 July 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |                                                                                                                                                |                                                                                         |
|------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                                                    | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                                           | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>9/21/2005</u> . | 6) <input type="checkbox"/> Other: _____                                                |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-4 are rejected under 35 U.S.C. 102(e) as being anticipated by  
Ramachandran et al.

Ramachandran et al. (US Pub. No. 2004/0141157 A1) discloses:

- Regarding claim 1, a rear projection display apparatus (Figure 6, element 16) comprising an optical engine (Figure 6, element 14) for providing an image beam; a multi-curvature reflection mirror (i.e. aspherical mirror; by definition, said aspheric mirror varies slightly from sphericity and has a slight aberration, therefore, it has a multi-curvature surface; Figure 6, element 39), installed at the optical paths of said image beam and constituted with a plurality of reflection faces with different curvatures (page 18, claim 1, lines 14-15), a screen (Figure 6, element 20), installed at said optical paths of said image beam reflected from said multi-curvature reflection mirror (Figure 6, element 39) for displaying images,

and a housing (i.e. cabinet; page 10, paragraph 0109, lines 6-11) for containing said optical engine (page 10, paragraph 0109, line 9), said multi-curvature reflection mirror (i.e. aspherical mirror; page 10, paragraph 0109, line 5), and said screen (Figure 12, element 20).

- Regarding claim 2, the curvature radius of said reflection face (i.e. curve mirror) is disposed depending on said optical path (page 18, claim 1, lines 14-18).
- Regarding claim 3, a plane mirror (Figure 6, element 33) is installed behind said screen (Figure 6, element 20), and said plane mirror (Figure 6, element 33) is positioned at said optical paths of said image beam reflected from said multi-curvature reflection mirror (i.e. aspherical mirror; by definition, said aspheric mirror varies slightly from sphericity and has a slight aberration, therefore, it has a multi-curvature surface; Figure 6, element 39).
- Regarding claim 4, a plane mirror (Figure 6, element 33) is installed parallel to said screen (Figure 6, element 20).

### ***Conclusion***

3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Matsuo (US Patent Number 6,879,444) discloses an imagining optical system capable of reading an image from an oblique direction and of projecting an image.

Yoshii et al. (US Patent Number 6,752,500 B1) teaches a rear projection display device capable of reducing the depth of a display device itself.

Kurematsu et al. (US Patent Number 6,883,922 B2) shows a display apparatus for obliquely projecting light from an image display unit onto a projection optical system.

Sakata et al. (US Pub. No. 2003/0011753 A1) discloses a rear projection optical system comprising a curved mirror decentered from the screen center in the vertical direction but centered against the screen center in the horizontal direction.

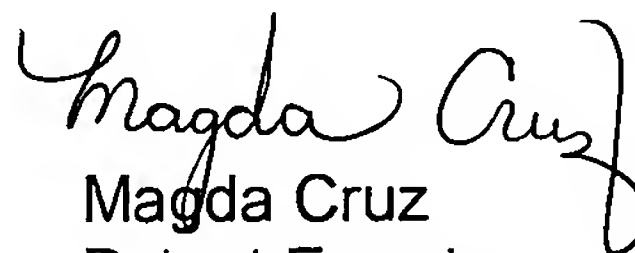
Matsuo (US Patent Number 6,947,221 B2) discloses an imaging optical system capable of reading an image from an oblique direction and of projecting an image.

Matsuo (US Patent Number 6,950,240 B2) teaches an oblique-incidence imaging optical system.

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Magda Cruz whose telephone number is (571) 272-2114. The examiner can normally be reached on Monday through Thursday 8:00-5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Judy Nguyen can be reached on (571) 272-2258. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Magda Cruz  
Patent Examiner  
Art Unit 2851

September 30, 2005